

Figure 1,
Prior Art

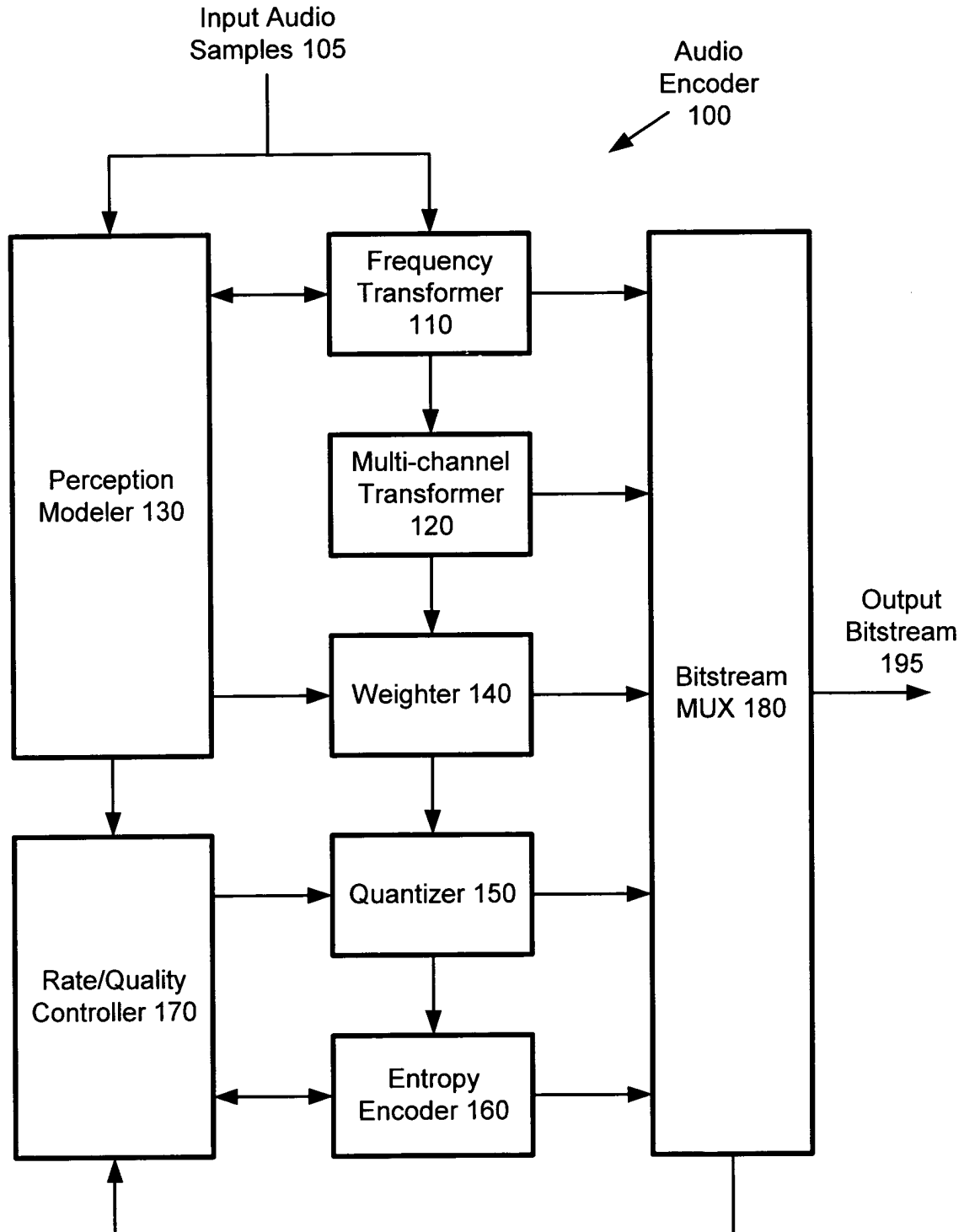


Figure 2,
Prior Art

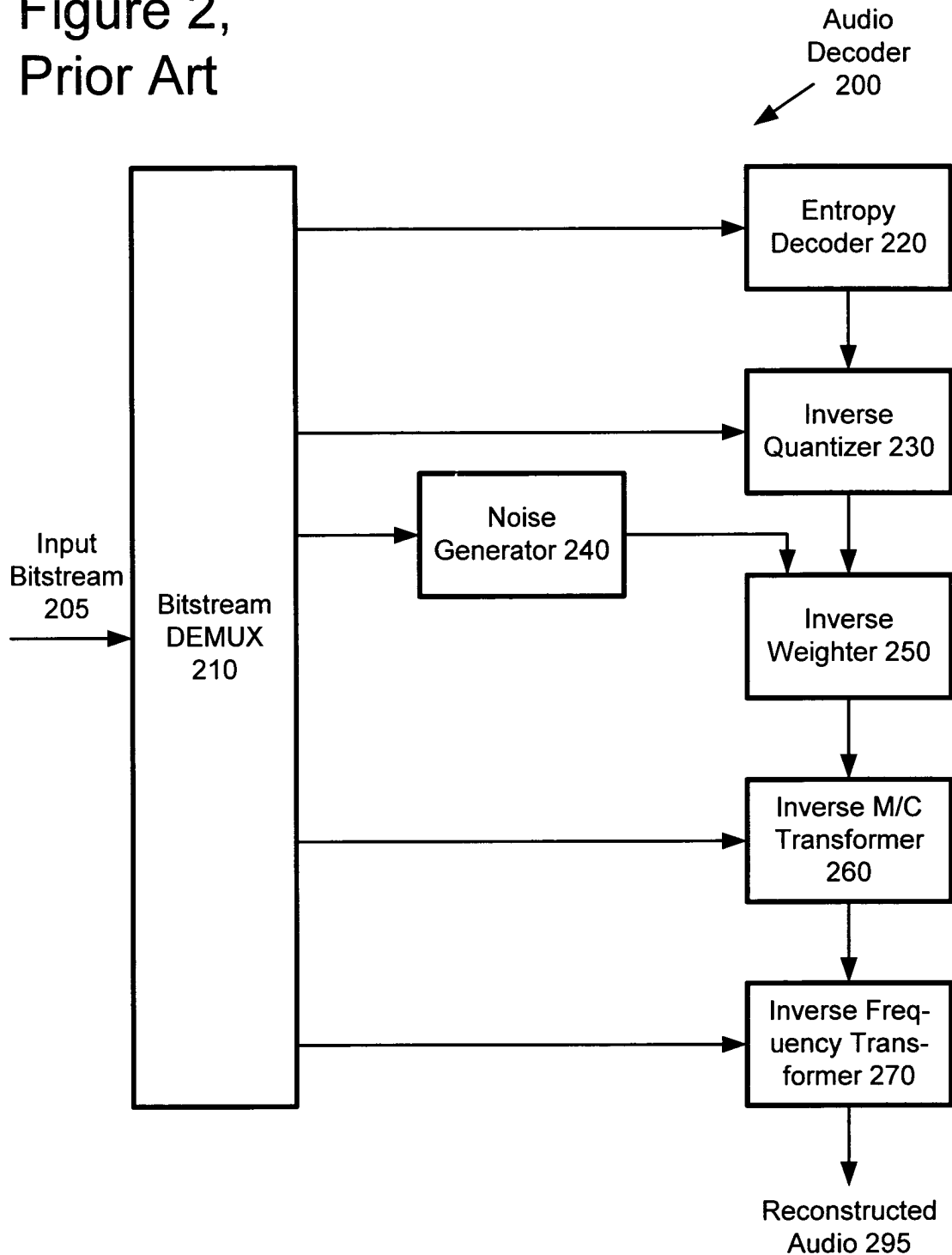


Figure 3a, Prior Art

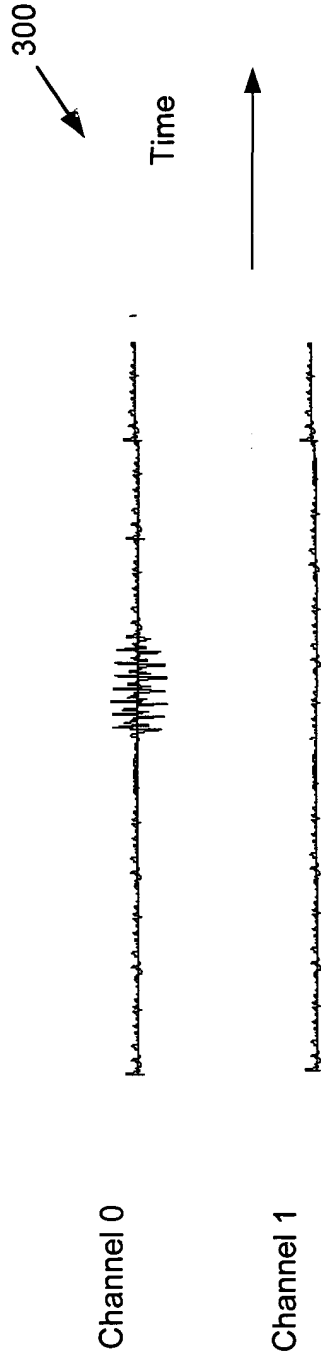


Figure 3b, Prior Art

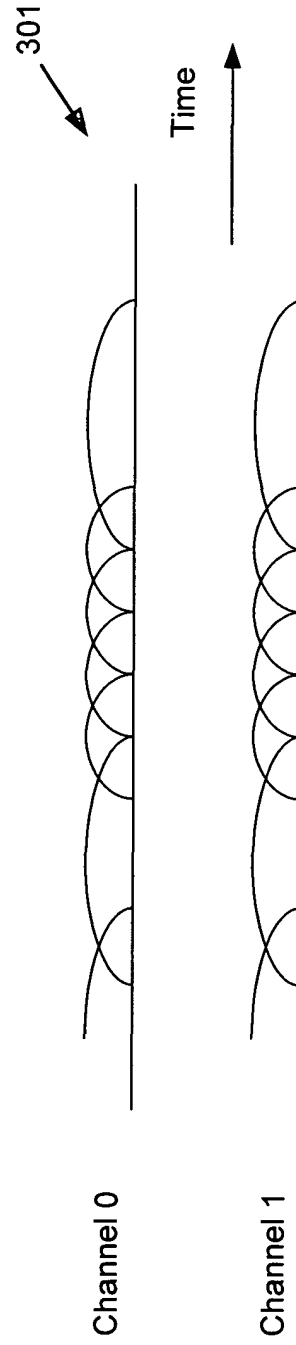


Figure 3c, Prior Art

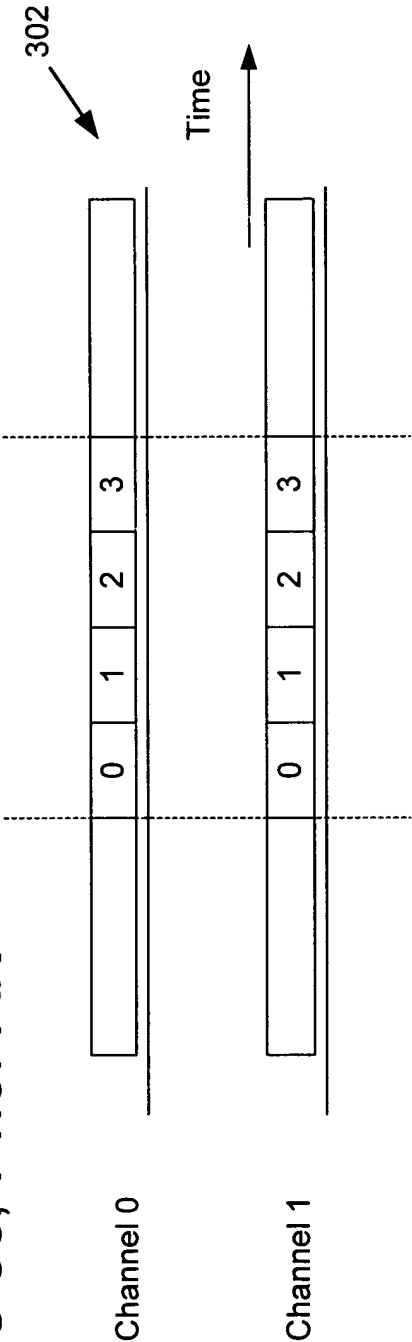


Figure 11a

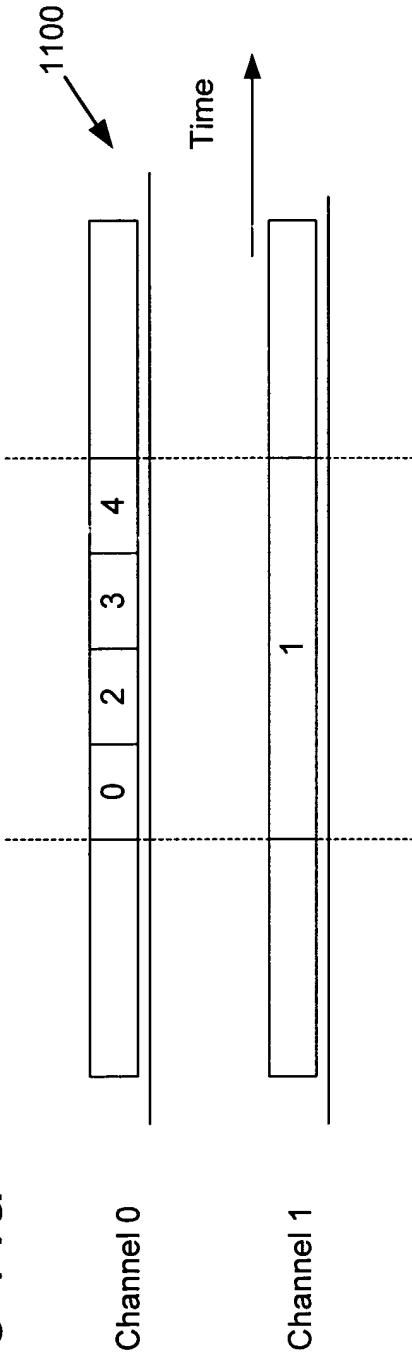


Figure 4

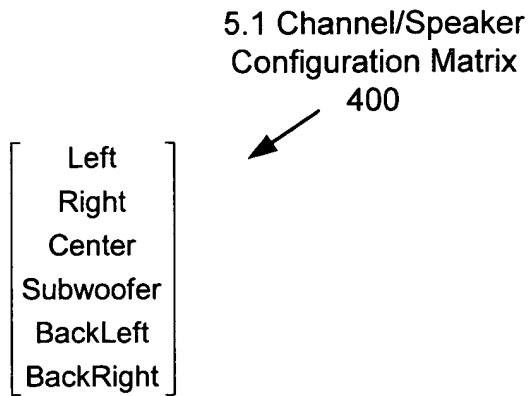


Figure 5

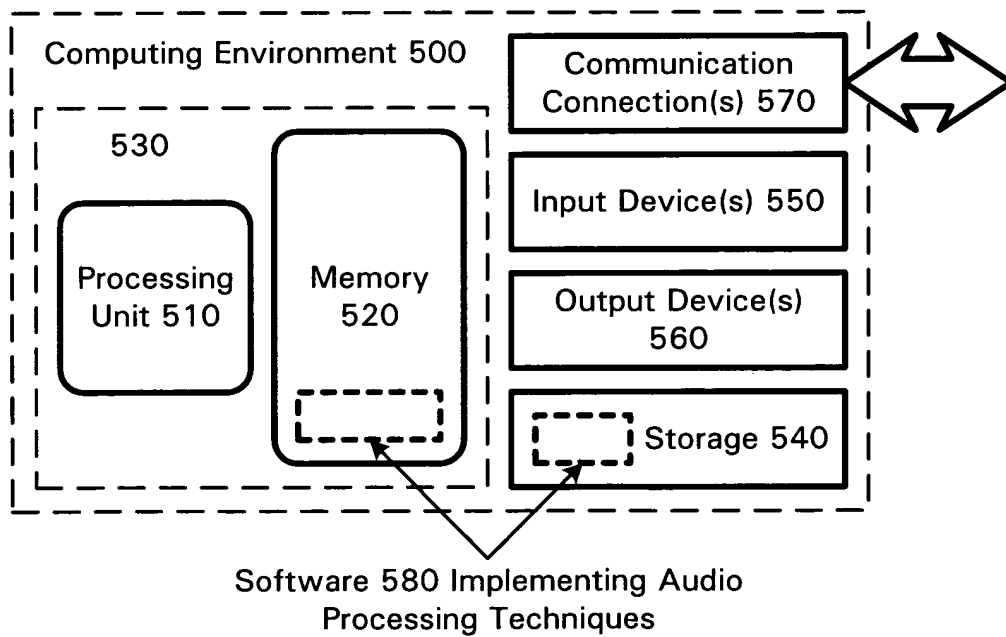


Figure 6

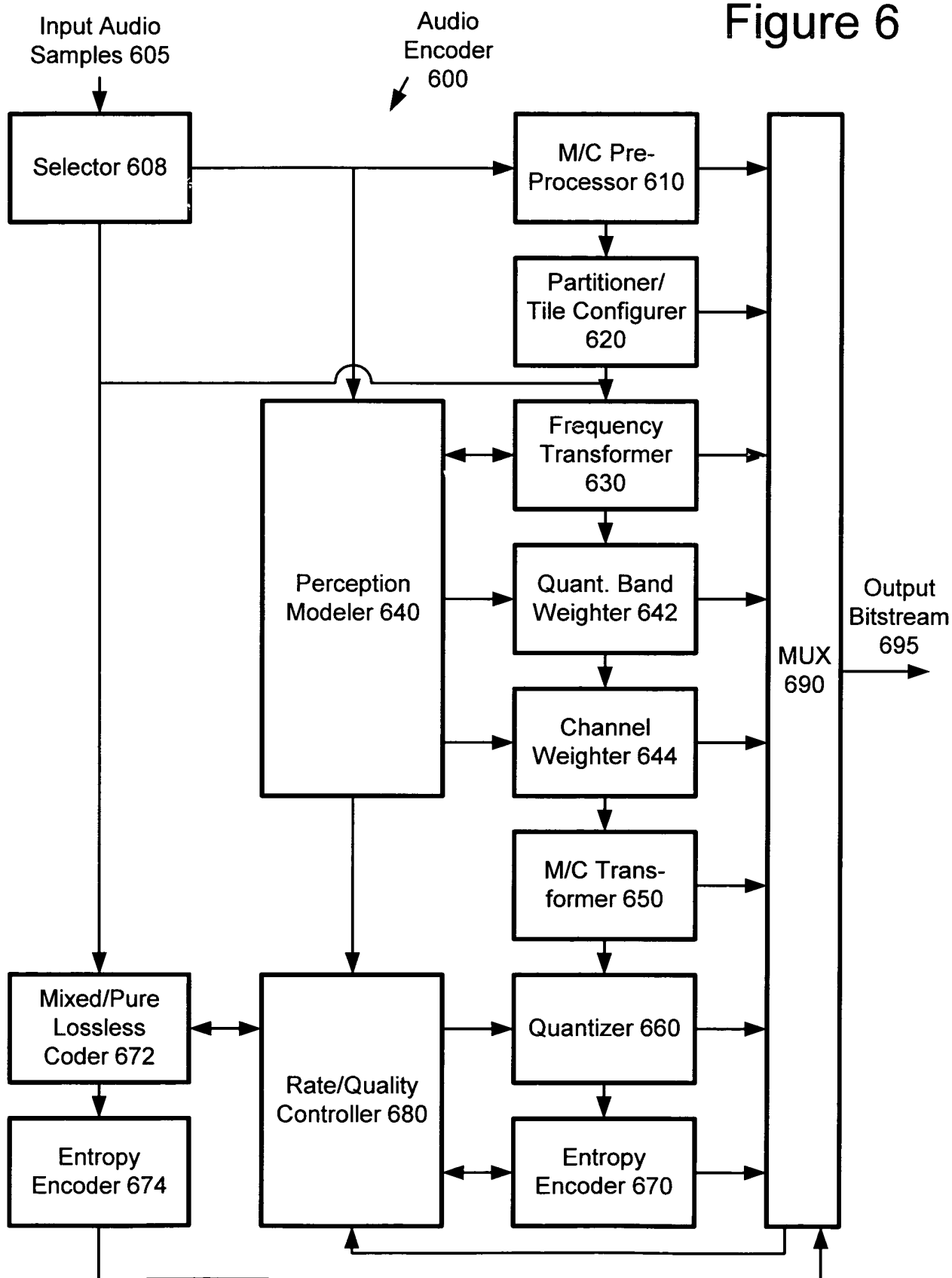


Figure 7

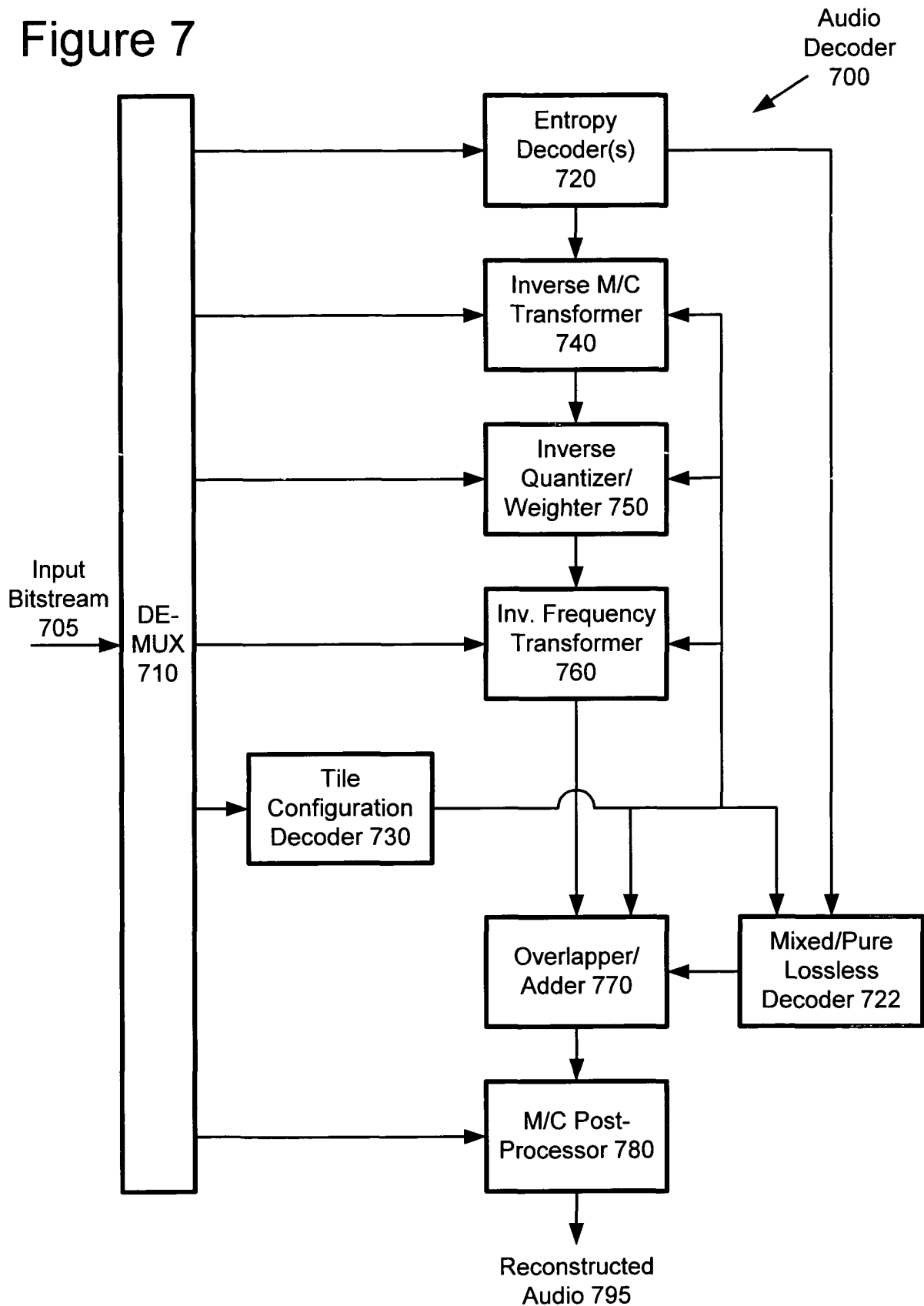


Figure 8

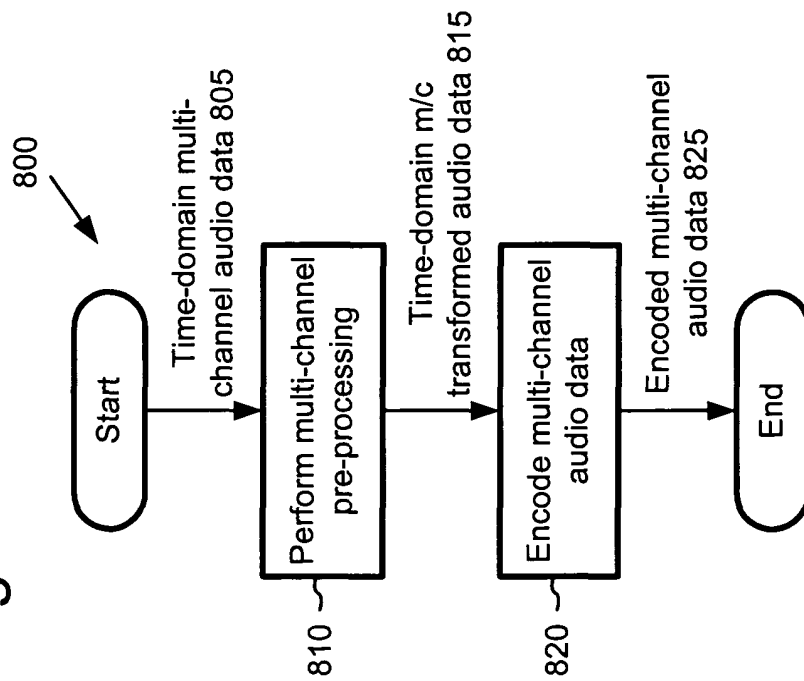


Figure 10

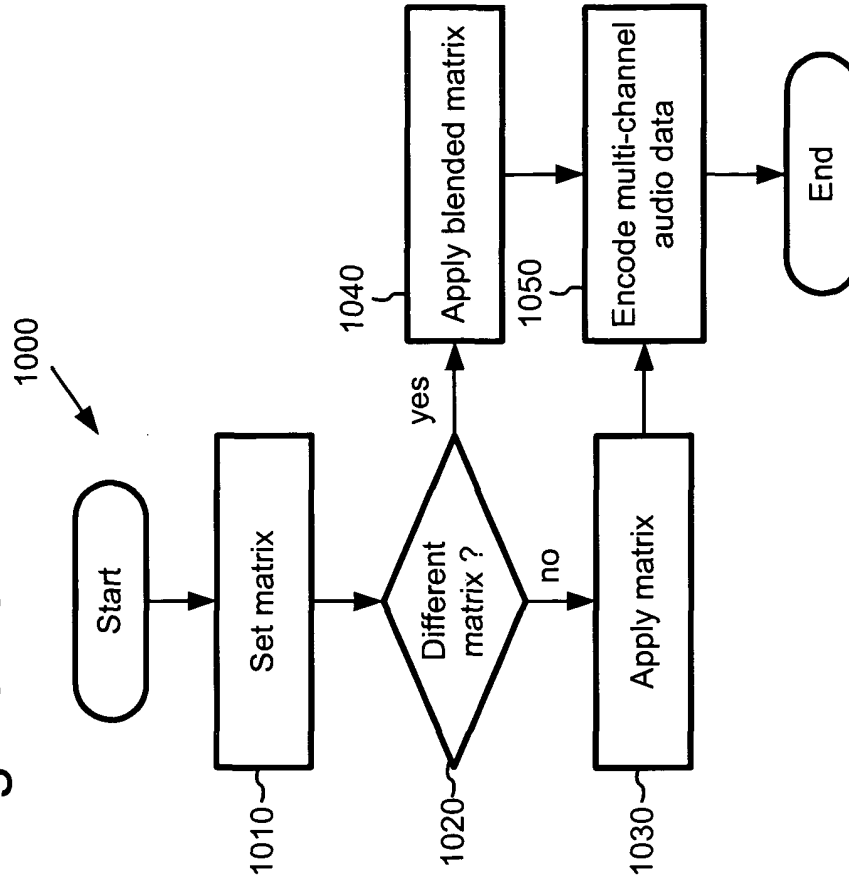


Figure 9a

Good quality
pre-processing
transform matrix
900

$$A_{\text{low}} = \begin{bmatrix} 1 & 0 & 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 0 & 0 & 1 \end{bmatrix}$$

Figure 9b

First
intermediate
quality pre-
processing
transform matrix
901

$$A_{\text{inter},1} = \begin{bmatrix} \left(\frac{1}{1+0.5 \cdot \alpha} \right) & 0 & \left(\frac{0.5 \cdot \alpha}{1+0.5 \cdot \alpha} \right) & 0 & 0 & 0 \\ 0 & \left(\frac{1}{1+0.5 \cdot \alpha} \right) & \left(\frac{0.5 \cdot \alpha}{1+0.5 \cdot \alpha} \right) & 0 & 0 & 0 \\ \left(\frac{\alpha}{1+2\alpha} \right) & \left(\frac{\alpha}{1+2\alpha} \right) & \left(\frac{1}{1+2\alpha} \right) & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 & \left(\frac{1}{1+\alpha} \right) & \left(\frac{\alpha}{1+\alpha} \right) \\ 0 & 0 & 0 & 0 & \left(\frac{\alpha}{1+\alpha} \right) & \left(\frac{1}{1+\alpha} \right) \end{bmatrix}$$

Figure 9c

First poor quality
pre-processing
transform matrix
902

$$A_{\text{high},1} = \begin{bmatrix} \left(\frac{1}{1.5} \right) & 0 & \left(\frac{0.5}{1.5} \right) & 0 & 0 & 0 \\ 0 & \left(\frac{1}{1.5} \right) & \left(\frac{0.5}{1.5} \right) & 0 & 0 & 0 \\ \left(\frac{1}{3} \right) & \left(\frac{1}{3} \right) & \left(\frac{1}{3} \right) & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0.5 & 0.5 \\ 0 & 0 & 0 & 0 & 0.5 & 0.5 \end{bmatrix}$$

Figure 9d

Second
 intermediate
 quality pre-
 processing
 transform matrix
 903

$$A_{\text{inter},2} = \begin{bmatrix} \left(\frac{1}{1+0.5 \cdot \alpha} \right) & 0 & \left(\frac{0.5 \cdot \alpha}{1+0.5 \cdot \alpha} \right) & 0 & 0 & 0 \\ 0 & \left(\frac{1}{1+0.5 \cdot \alpha} \right) & \left(\frac{0.5 \cdot \alpha}{1+0.5 \cdot \alpha} \right) & 0 & 0 & 0 \\ 0.5 \cdot \alpha & 0.5 \cdot \alpha & 1-\alpha & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 & \left(\frac{1}{1+\alpha} \right) & \left(\frac{\alpha}{1+\alpha} \right) \\ 0 & 0 & 0 & 0 & \left(\frac{\alpha}{1+\alpha} \right) & \left(\frac{1}{1+\alpha} \right) \end{bmatrix}$$

Figure 9e

Second poor
 quality pre-
 processing
 transform matrix
 904

$$A_{\text{high},2} = \begin{bmatrix} \left(\frac{1}{1.5} \right) & 0 & \left(\frac{0.5}{1.5} \right) & 0 & 0 & 0 \\ 0 & \left(\frac{1}{1.5} \right) & \left(\frac{0.5}{1.5} \right) & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0.5 & 0.5 \\ 0 & 0 & 0 & 0 & 0.5 & 0.5 \end{bmatrix}$$

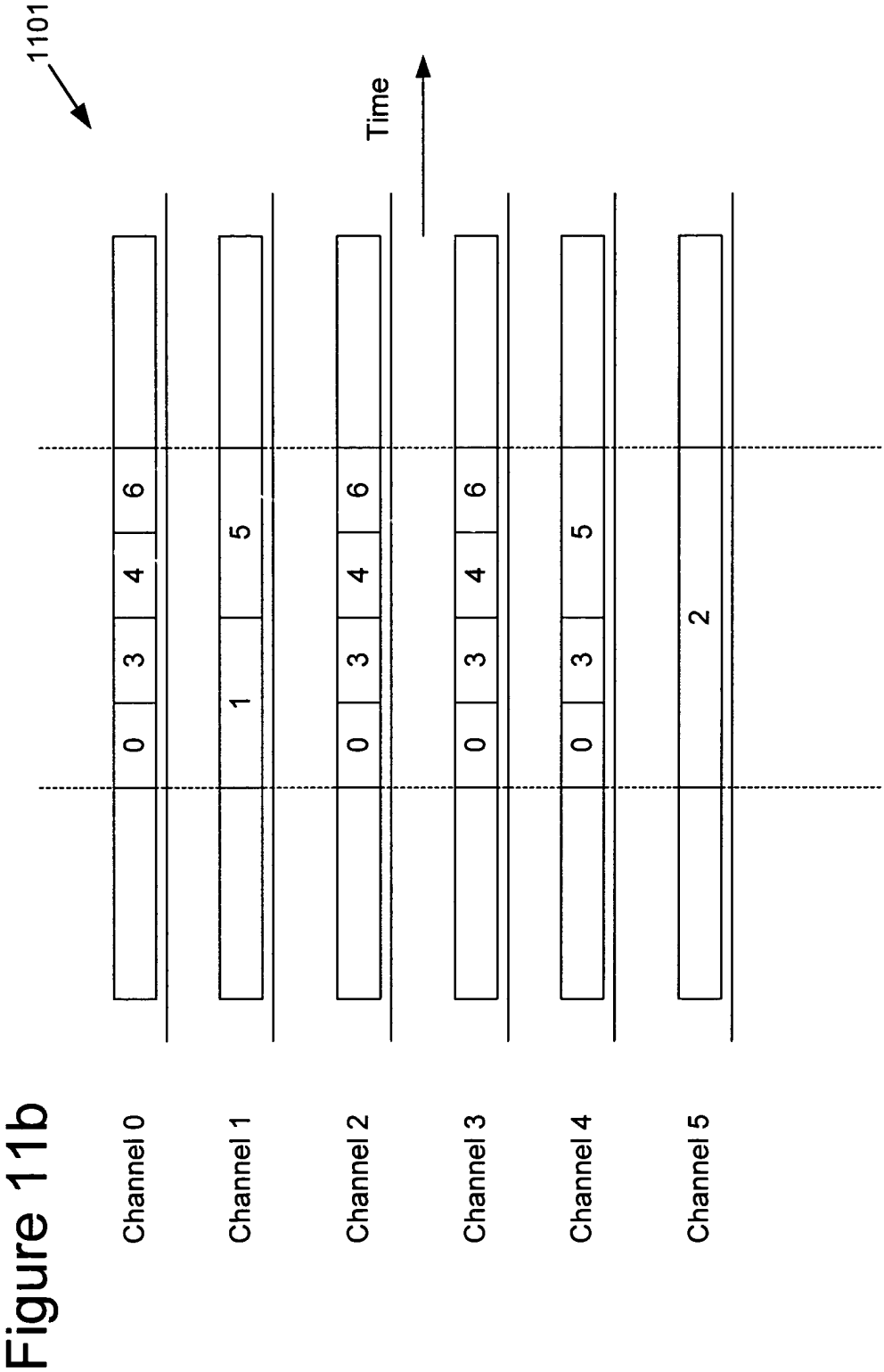


Figure 15 1500

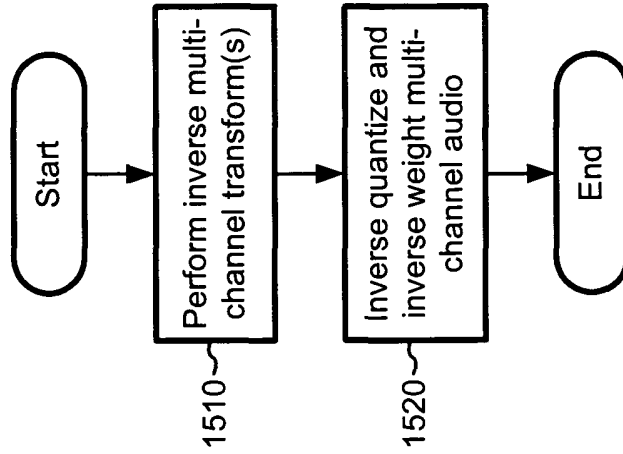


Figure 14 1400

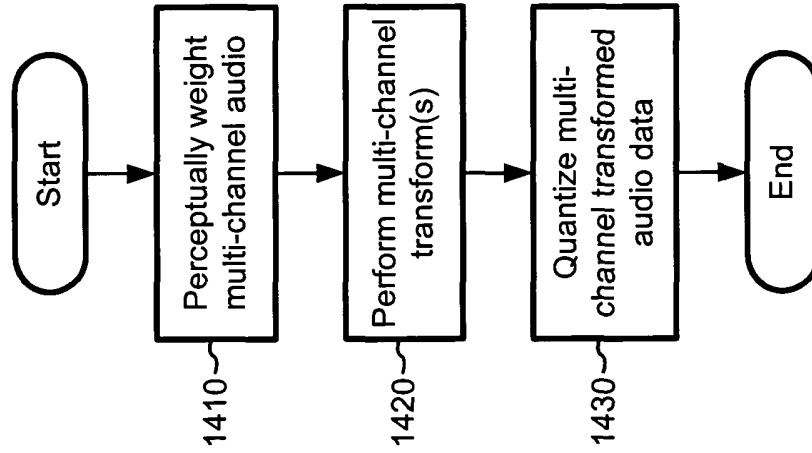


Figure 12 1200

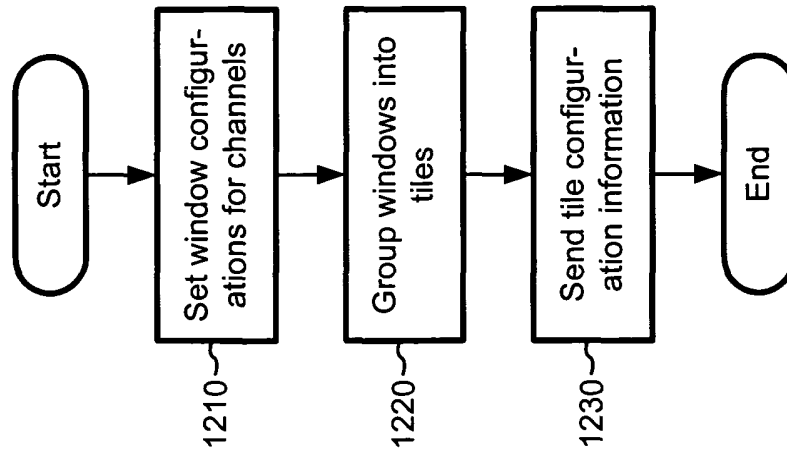


Figure 13

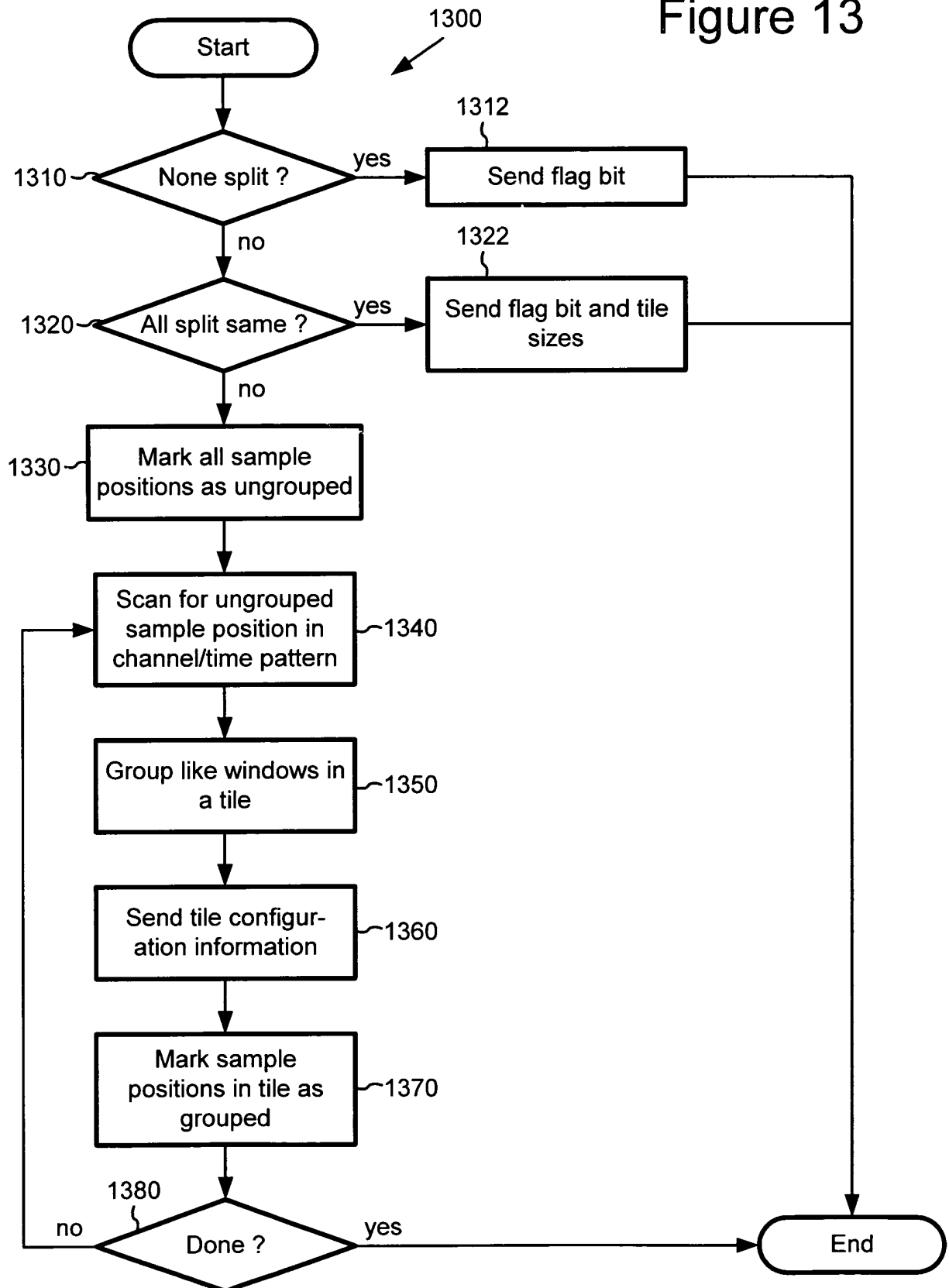


Figure 16

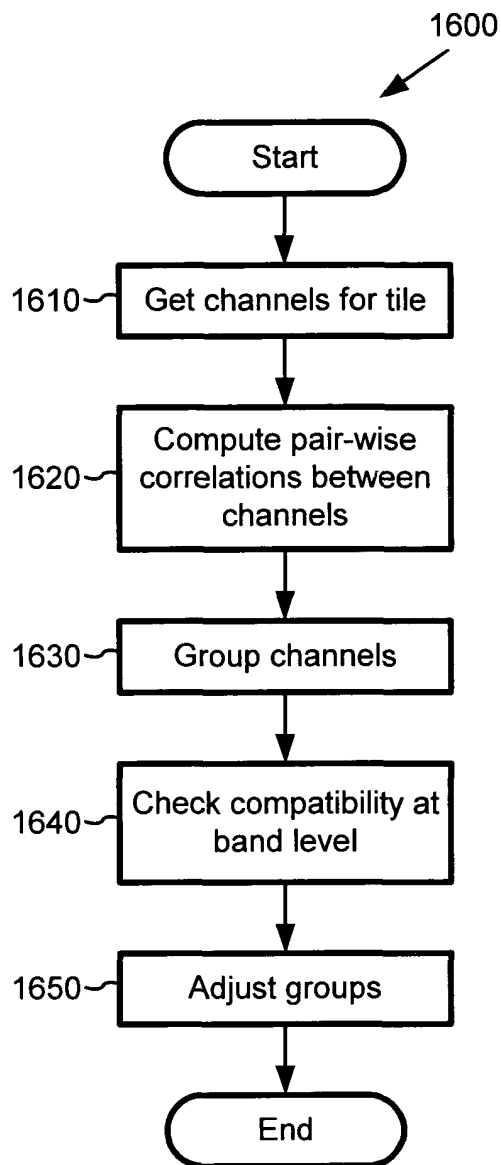


Figure 17

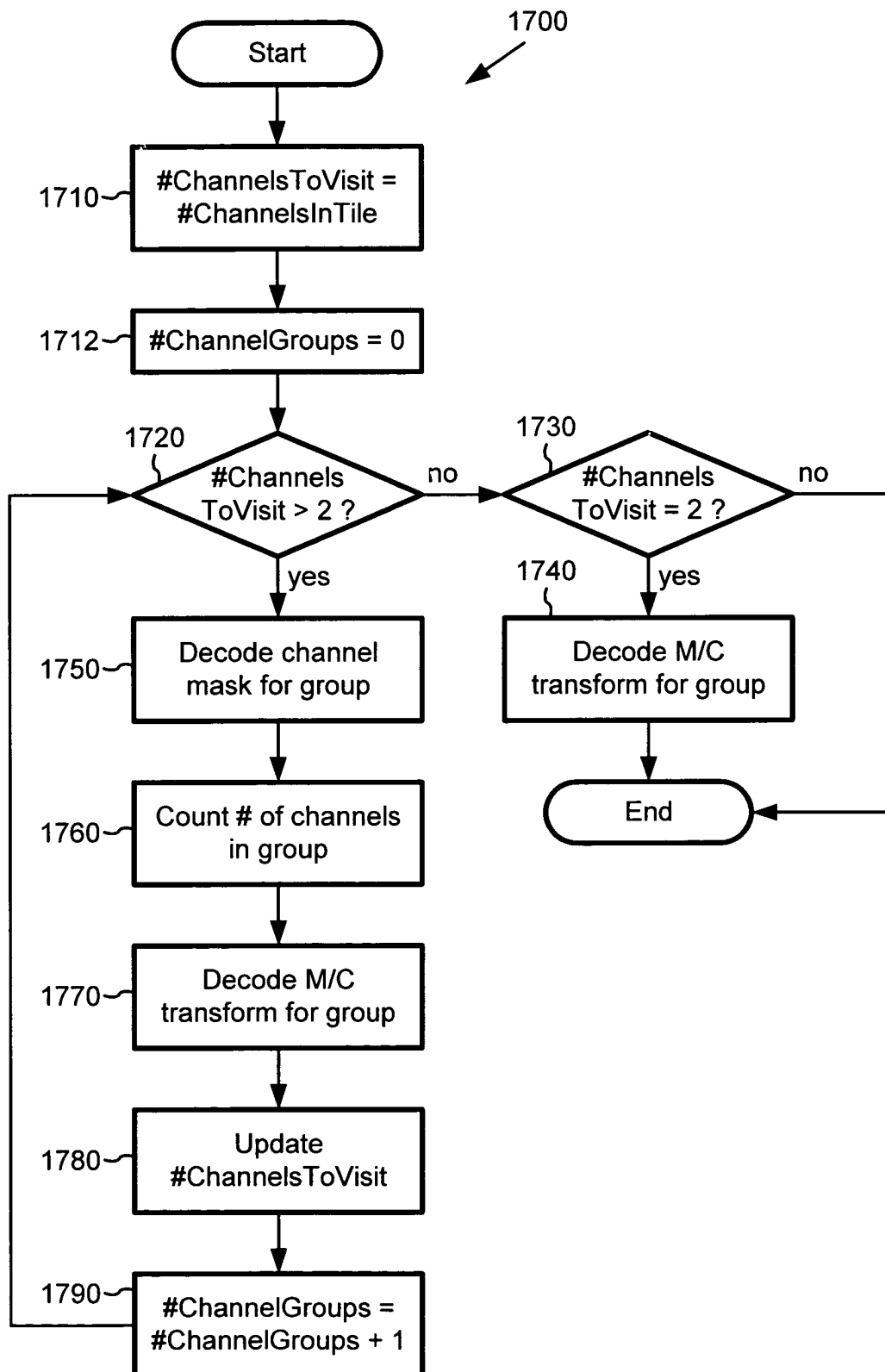


Figure 18

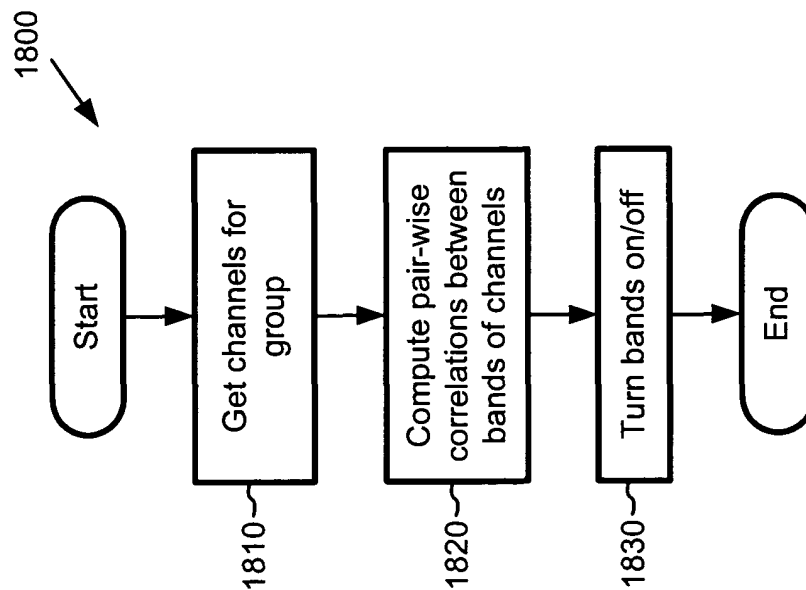


Figure 19

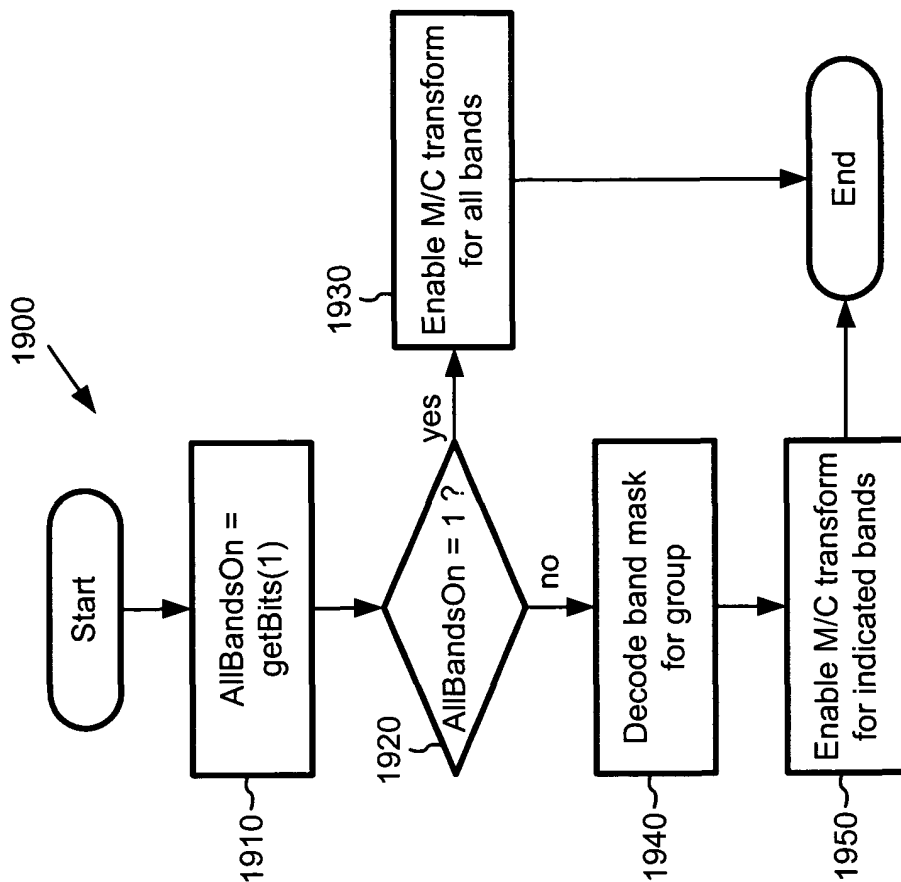


Figure 20

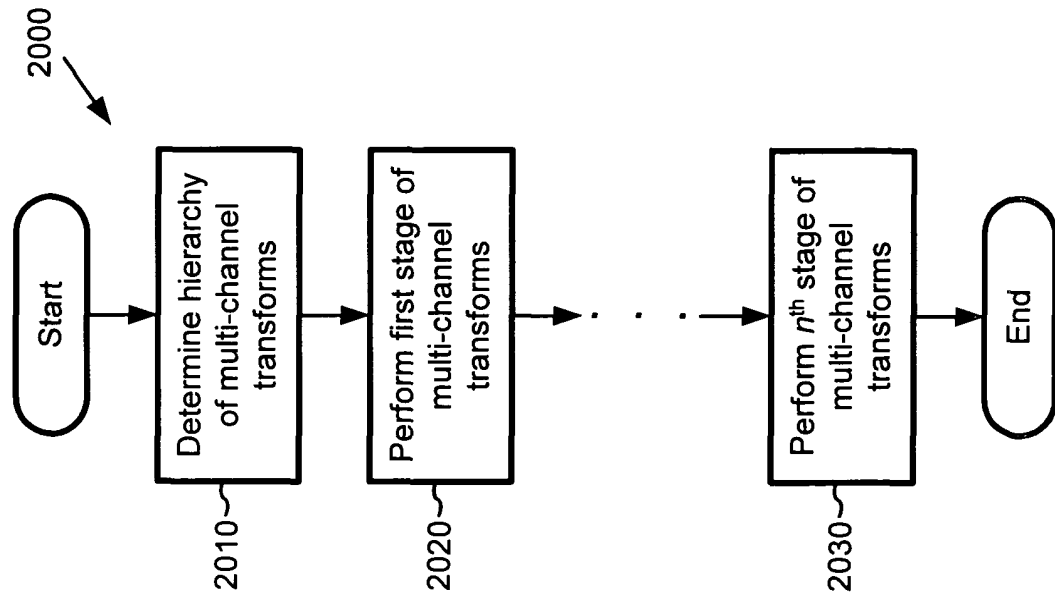


Figure 22

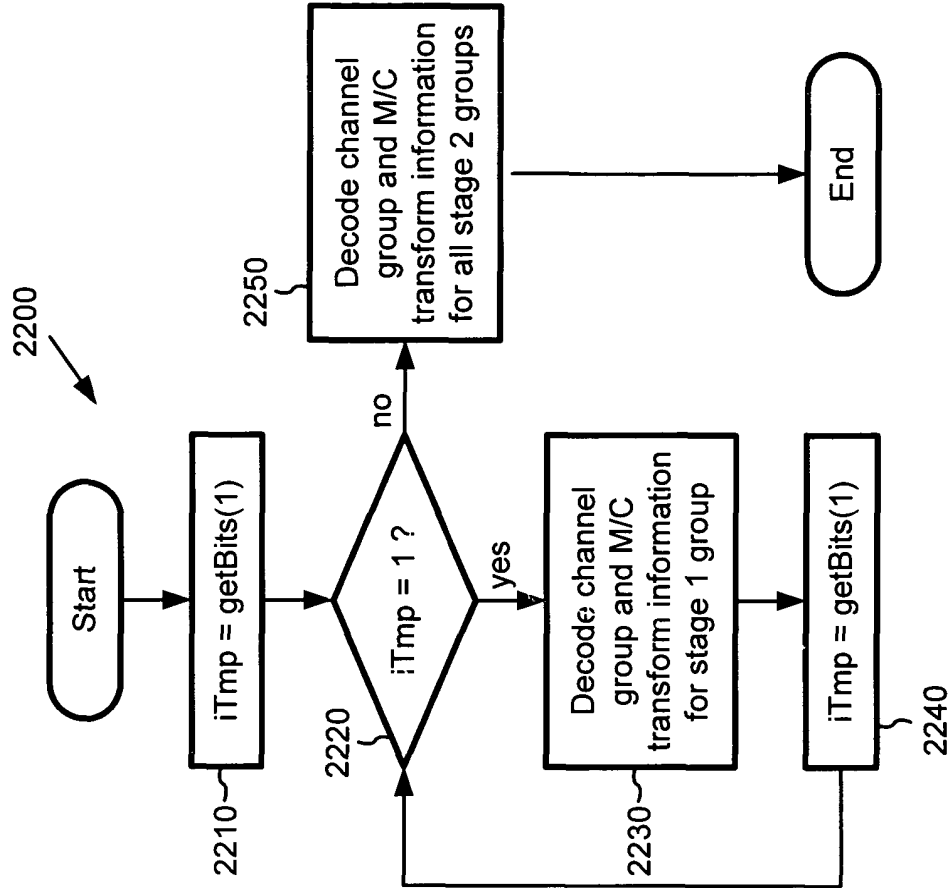


Figure 21

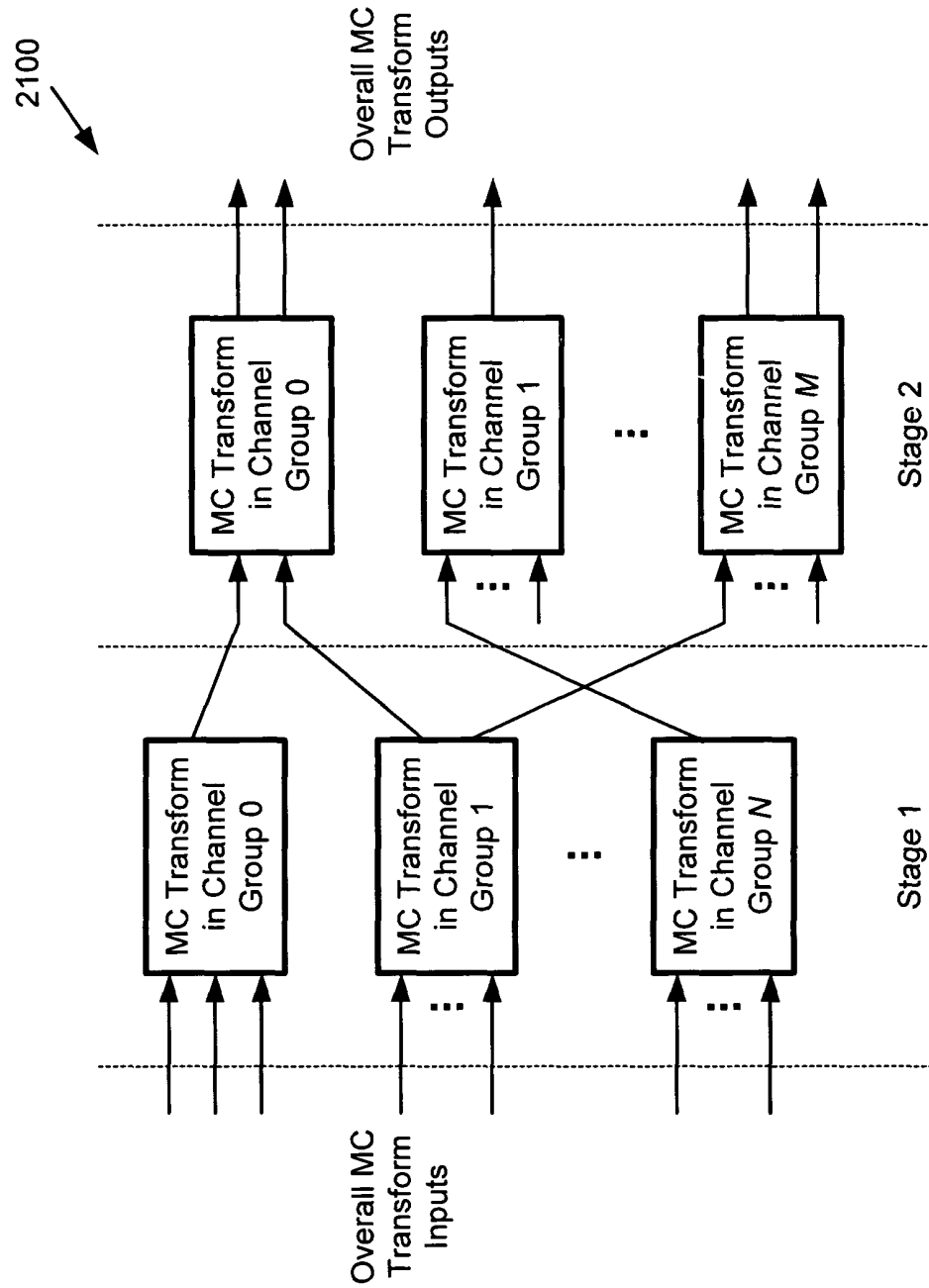


Figure 23

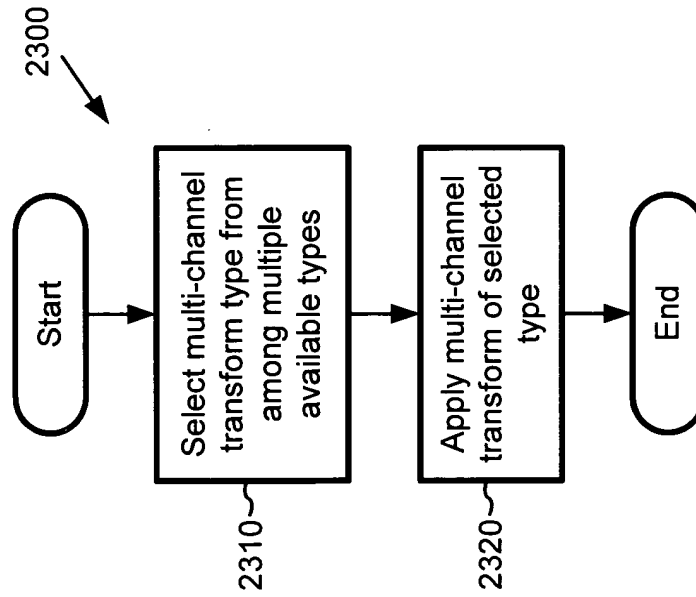


Figure 24

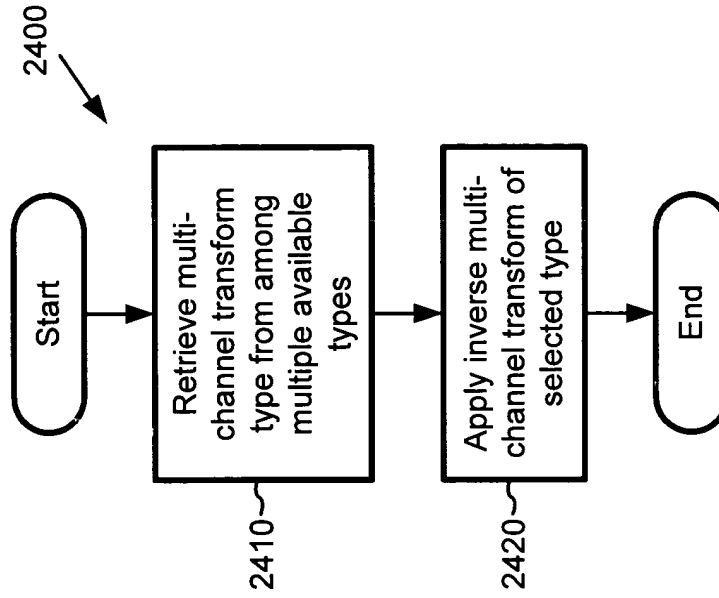


Figure 25

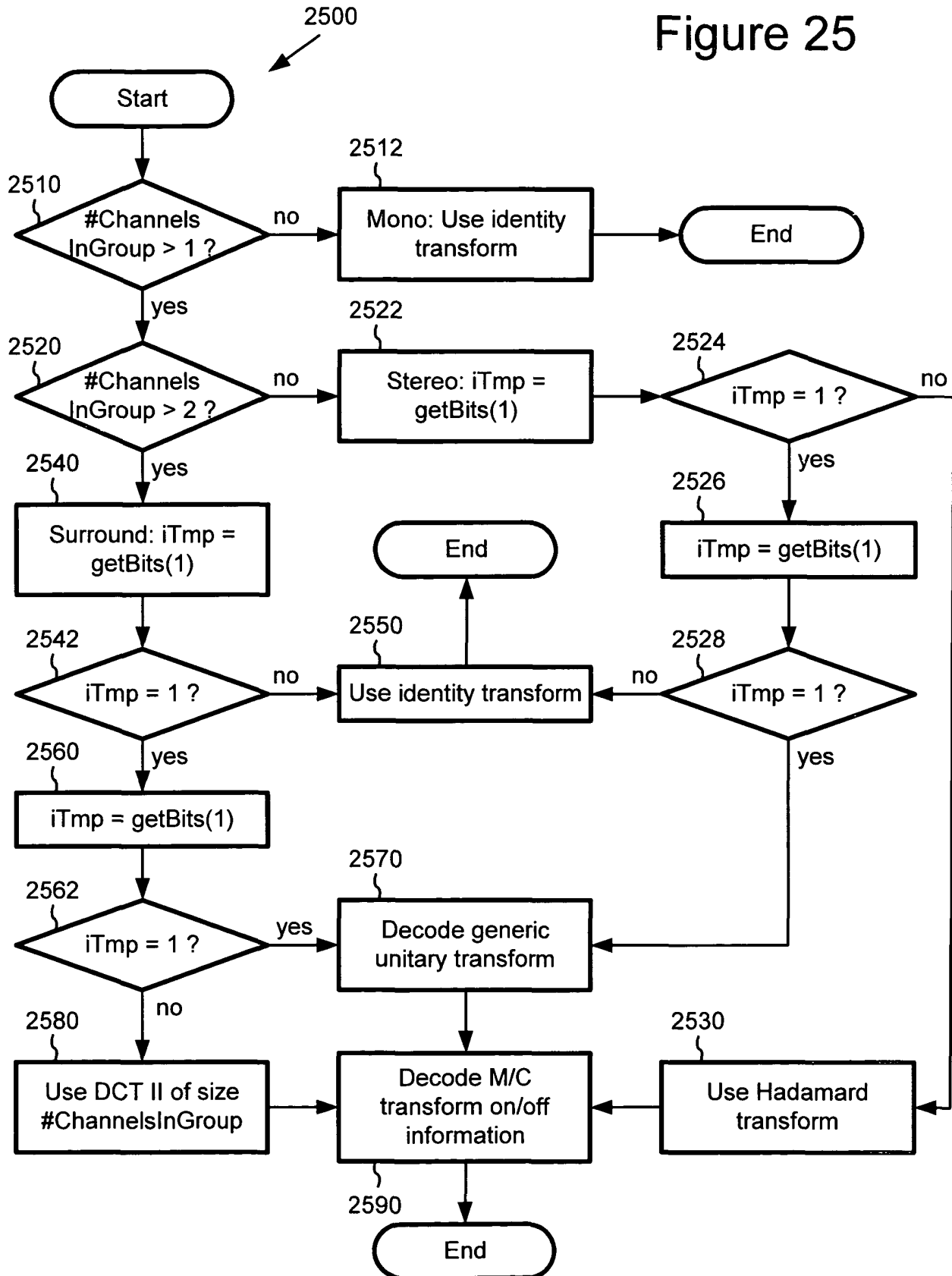


Figure 28

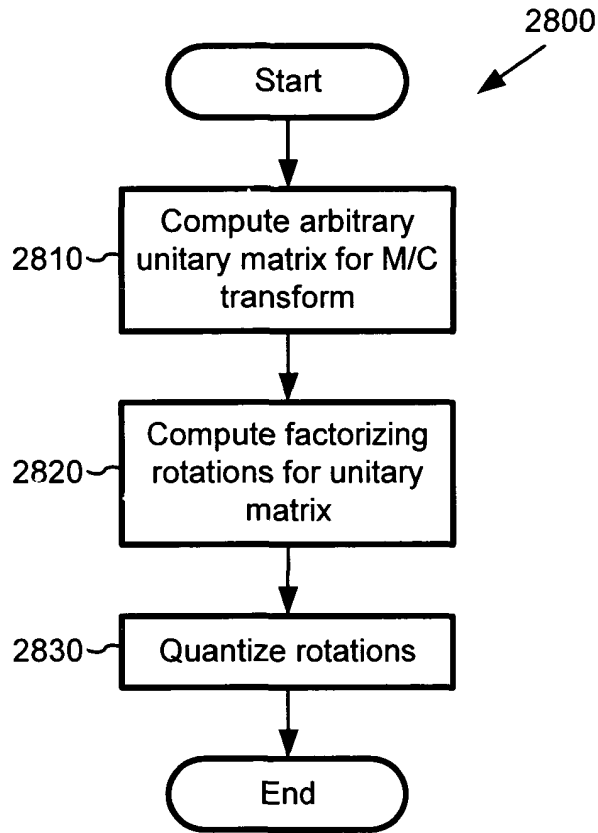


Figure 26

2600

$$\begin{bmatrix}
 1 & 0 & 0 & 0 & \cdots & 0 & 0 & 0 & 0 \\
 0 & 1 & 0 & 0 & \cdots & 0 & 0 & 0 & 0 \\
 0 & 0 & \cos \omega_k & 0 & \cdots & \sin \omega_k & 0 & 0 & 0 \\
 0 & 0 & 0 & 1 & \cdots & 0 & 0 & 0 & 0 \\
 \cdots & \cdots & \cdots & \cdots & \cdots & \cdots & \cdots & \cdots & \cdots \\
 0 & 0 & -\sin \omega_k & 0 & \cdots & \cos \omega_k & 0 & 0 & 0 \\
 0 & 0 & 0 & 0 & \cdots & 0 & 1 & 0 & 0 \\
 0 & 0 & 0 & 0 & \cdots & 0 & 0 & 1 & 0 \\
 0 & 0 & 0 & 0 & \cdots & 0 & 0 & 0 & 1
 \end{bmatrix}$$

Figure 27a

$$\Theta_1 = \begin{bmatrix} \cos \varpi_1 & \sin \varpi_1 & 0 & 0 & 0 & 0 & 0 & \dots & 0 \\ -\sin \varpi_1 & \cos \varpi_1 & 0 & 0 & 0 & 0 & 0 & \dots & 0 \\ 0 & 0 & 1 & 0 & 0 & 0 & 0 & \dots & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 & 0 & \dots & 0 \\ 0 & 0 & 0 & 0 & 1 & 0 & 0 & \dots & 0 \\ 0 & 0 & 0 & 0 & 0 & 1 & 0 & \dots & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 1 & \dots & 0 \\ \dots & \dots & \dots & \dots & \dots & \dots & \dots & \dots & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & \dots & 1 \end{bmatrix} \quad \swarrow 2700$$

Figure 27b

$$\Theta_2 = \begin{bmatrix} \cos \varpi_2 & 0 & \sin \varpi_2 & 0 & 0 & 0 & 0 & \dots & 0 \\ 0 & 1 & 0 & 0 & 0 & 0 & 0 & \dots & 0 \\ -\sin \varpi_2 & 0 & \cos \varpi_2 & 0 & 0 & 0 & 0 & \dots & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 & 0 & \dots & 0 \\ 0 & 0 & 0 & 0 & 1 & 0 & 0 & \dots & 0 \\ 0 & 0 & 0 & 0 & 0 & 1 & 0 & \dots & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 1 & \dots & 0 \\ \dots & \dots & \dots & \dots & \dots & \dots & \dots & \dots & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & \dots & 1 \end{bmatrix} \quad \swarrow 2701$$

Figure 27c

$$\Theta_3 = \begin{bmatrix} 1 & 0 & 0 & 0 & 0 & 0 & 0 & \dots & 0 \\ 0 & \cos \varpi_3 & \sin \varpi_3 & 0 & 0 & 0 & 0 & \dots & 0 \\ 0 & -\sin \varpi_3 & \cos \varpi_3 & 0 & 0 & 0 & 0 & \dots & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 & 0 & \dots & 0 \\ 0 & 0 & 0 & 0 & 1 & 0 & 0 & \dots & 0 \\ 0 & 0 & 0 & 0 & 0 & 1 & 0 & \dots & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 1 & \dots & 0 \\ \dots & \dots & \dots & \dots & \dots & \dots & \dots & \dots & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & \dots & 1 \end{bmatrix} \quad \swarrow 2702$$

Figure 29

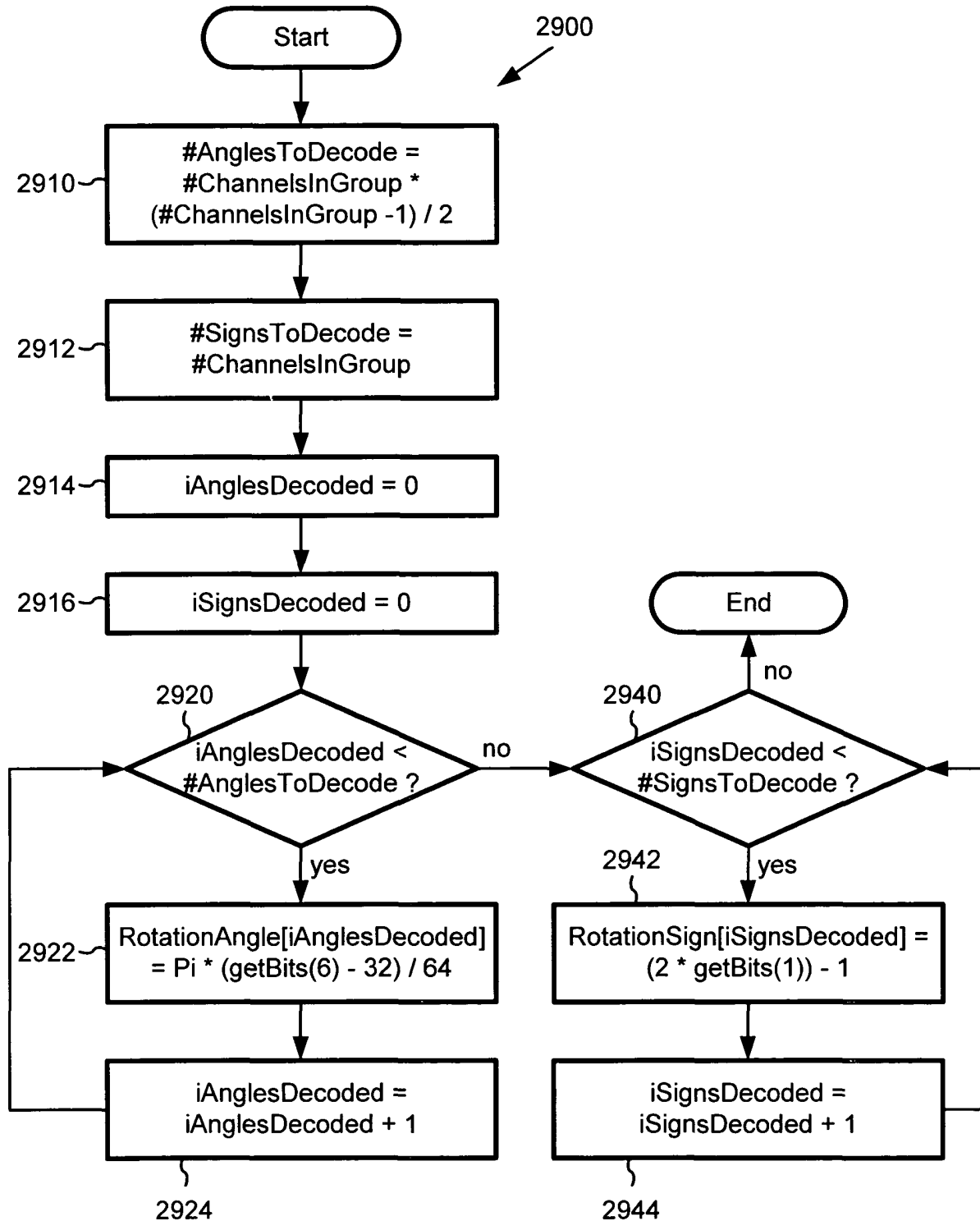


Figure 30

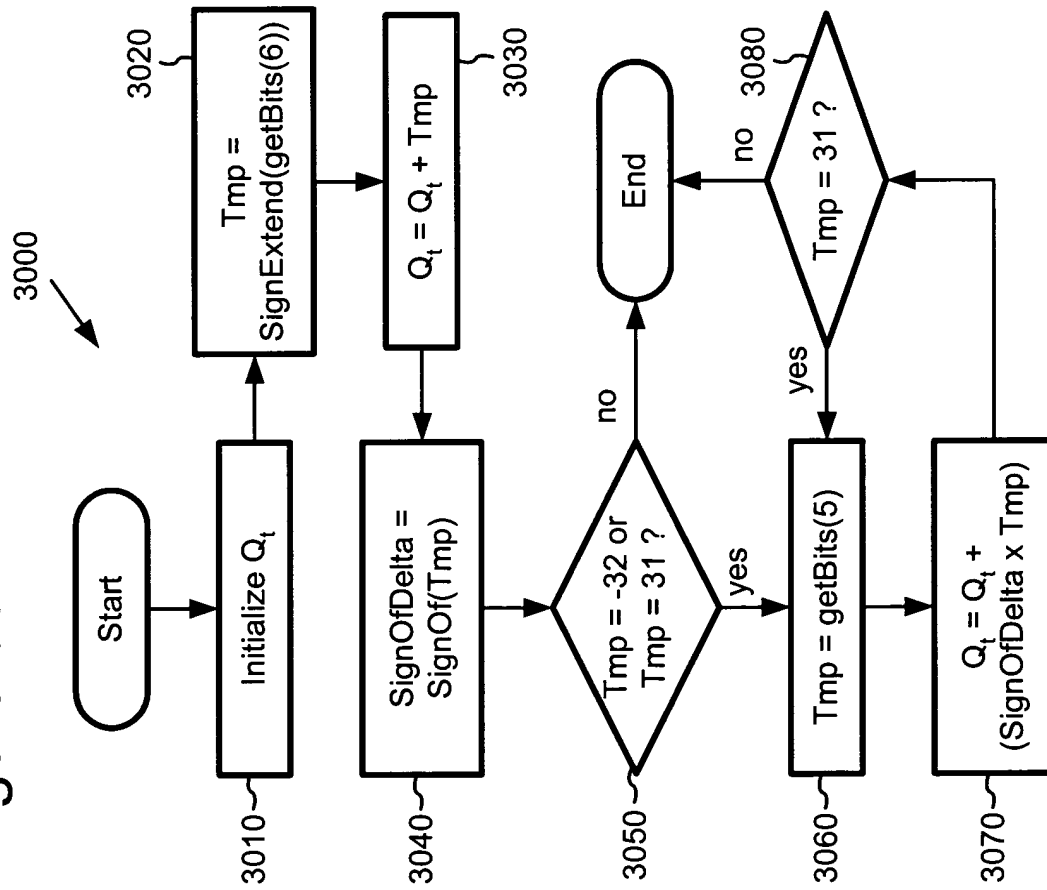


Figure 31

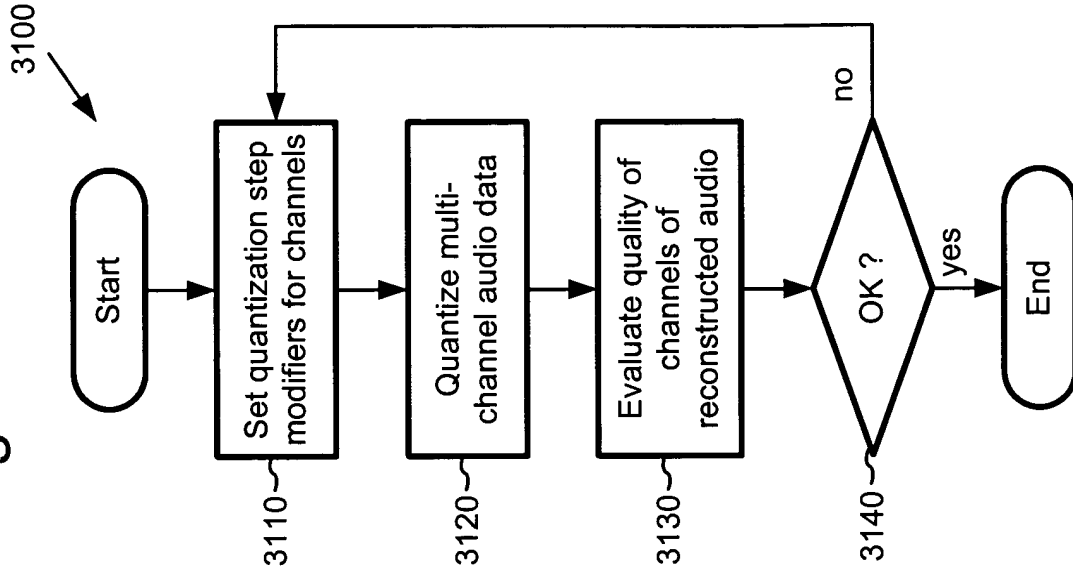


Figure 32

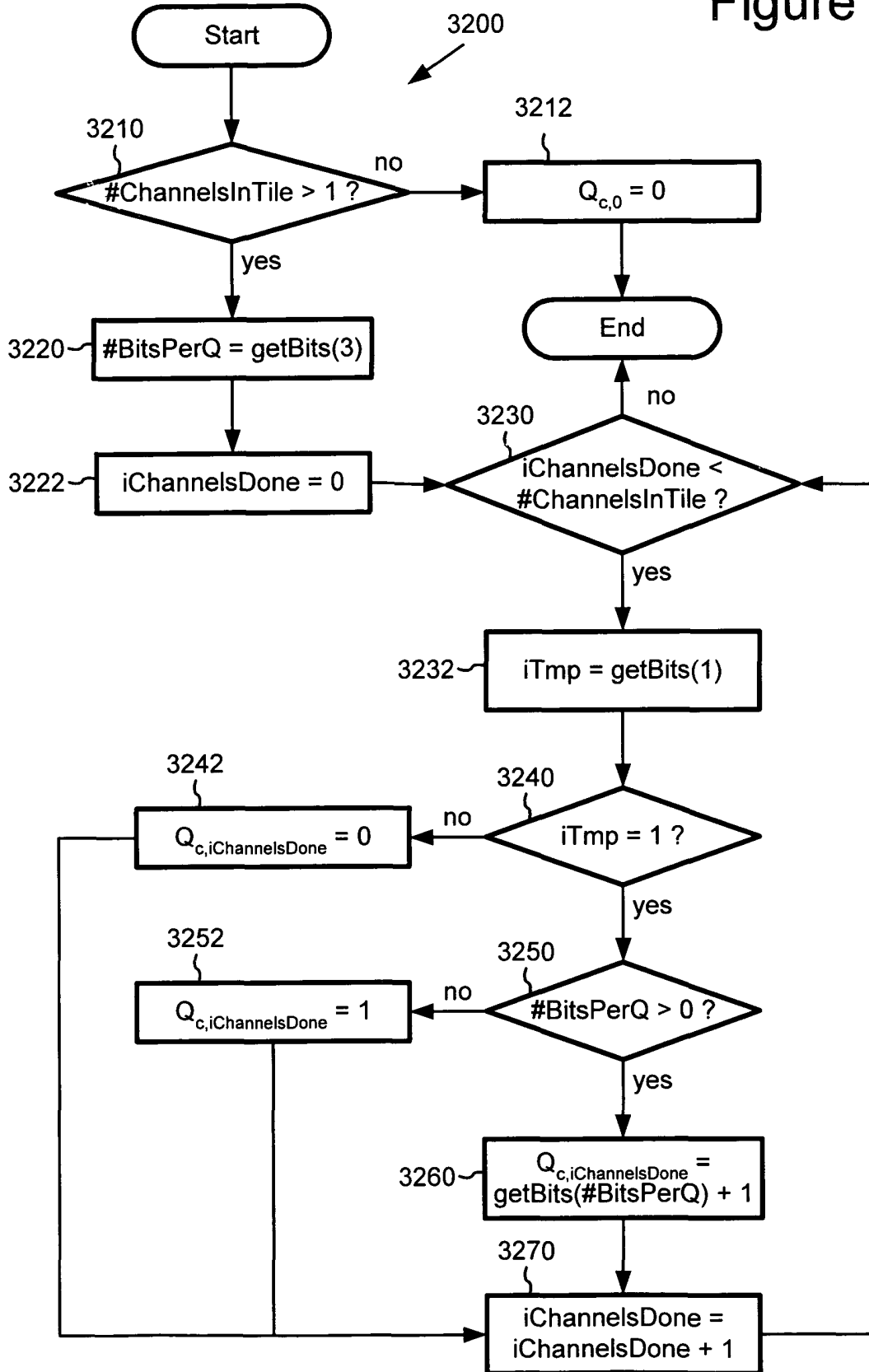


Figure 33

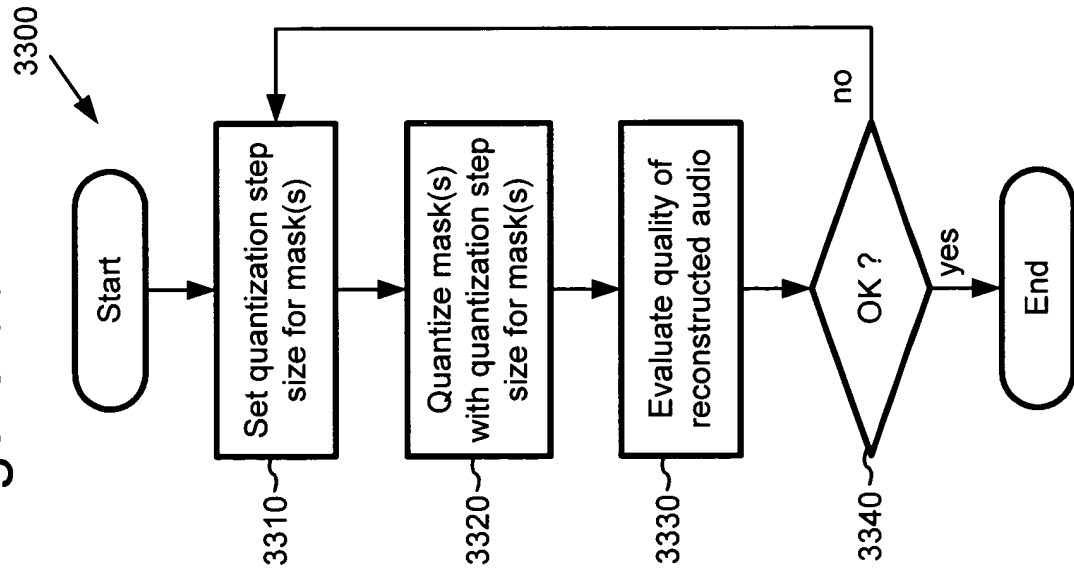


Figure 34

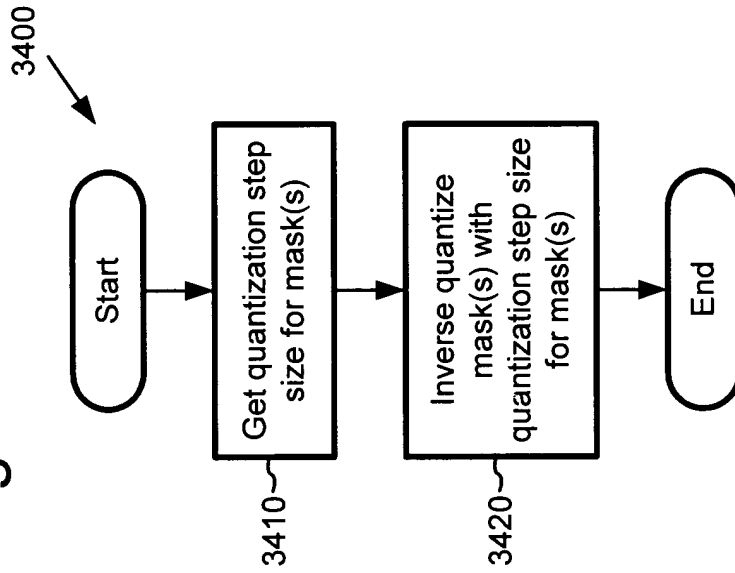


Figure 35

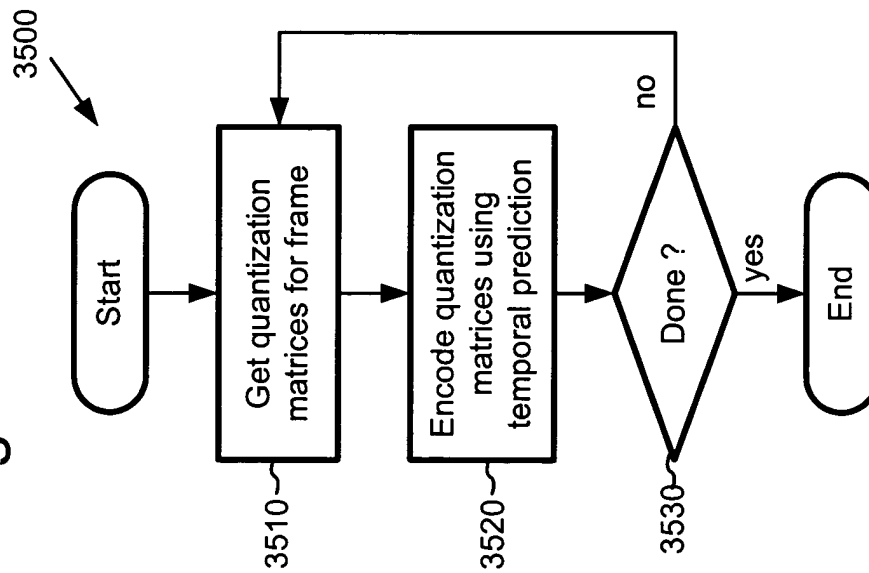


Figure 36

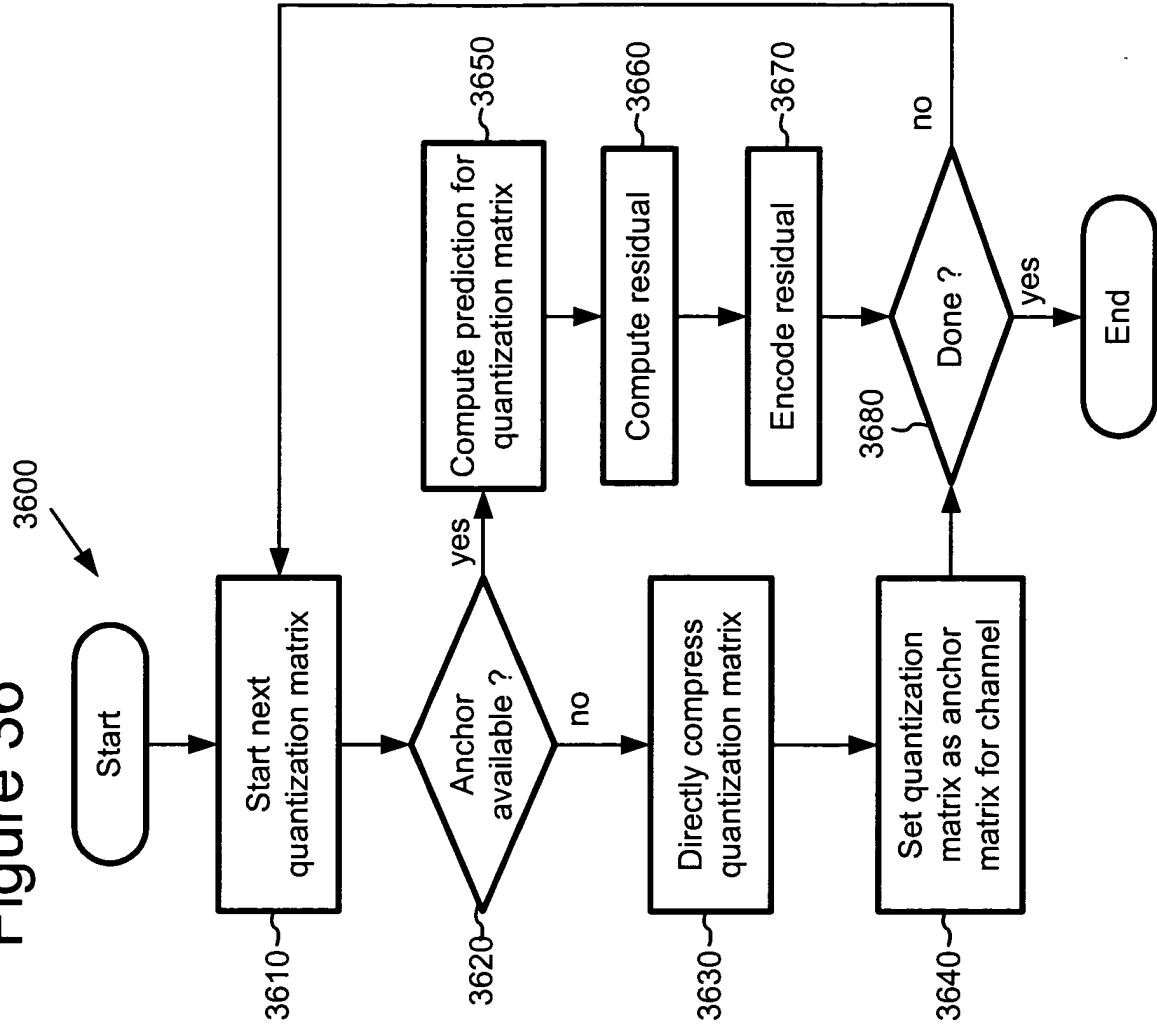


Figure 37

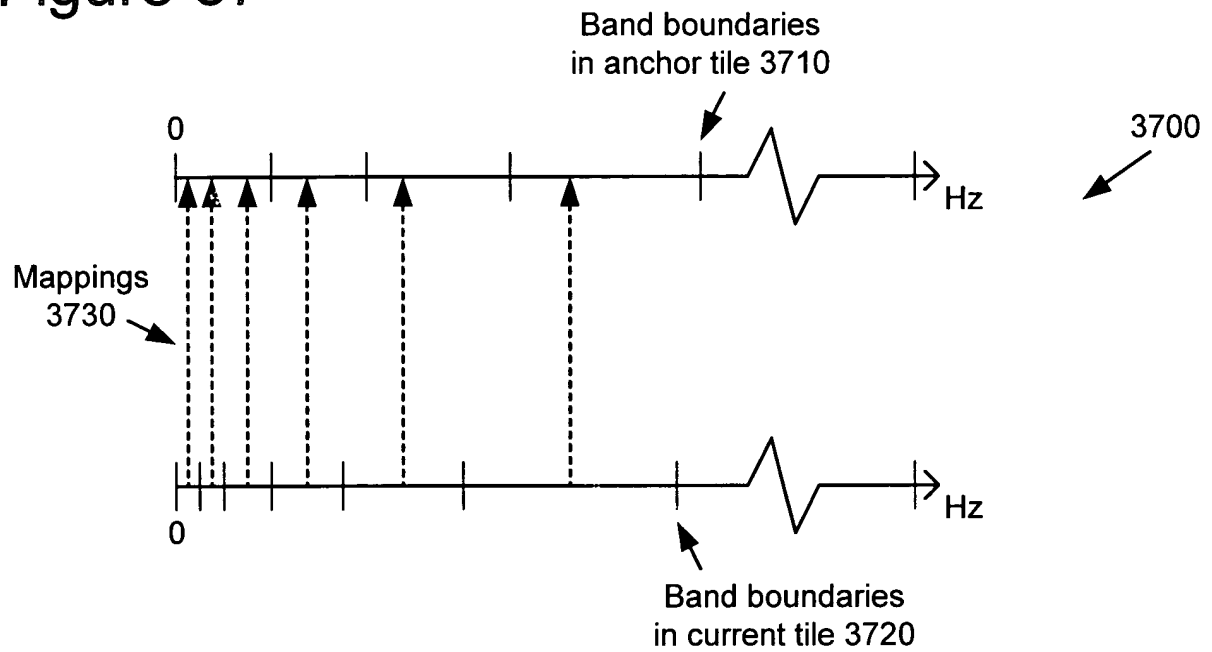


Figure 40

$$A_{P\text{-Center}} = \begin{bmatrix} 1 & 0 & 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 & 0 \\ 0.5 & 0.5 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 0 & 0 & 1 \end{bmatrix}$$

Post-processing transform matrix
4000

Figure 38

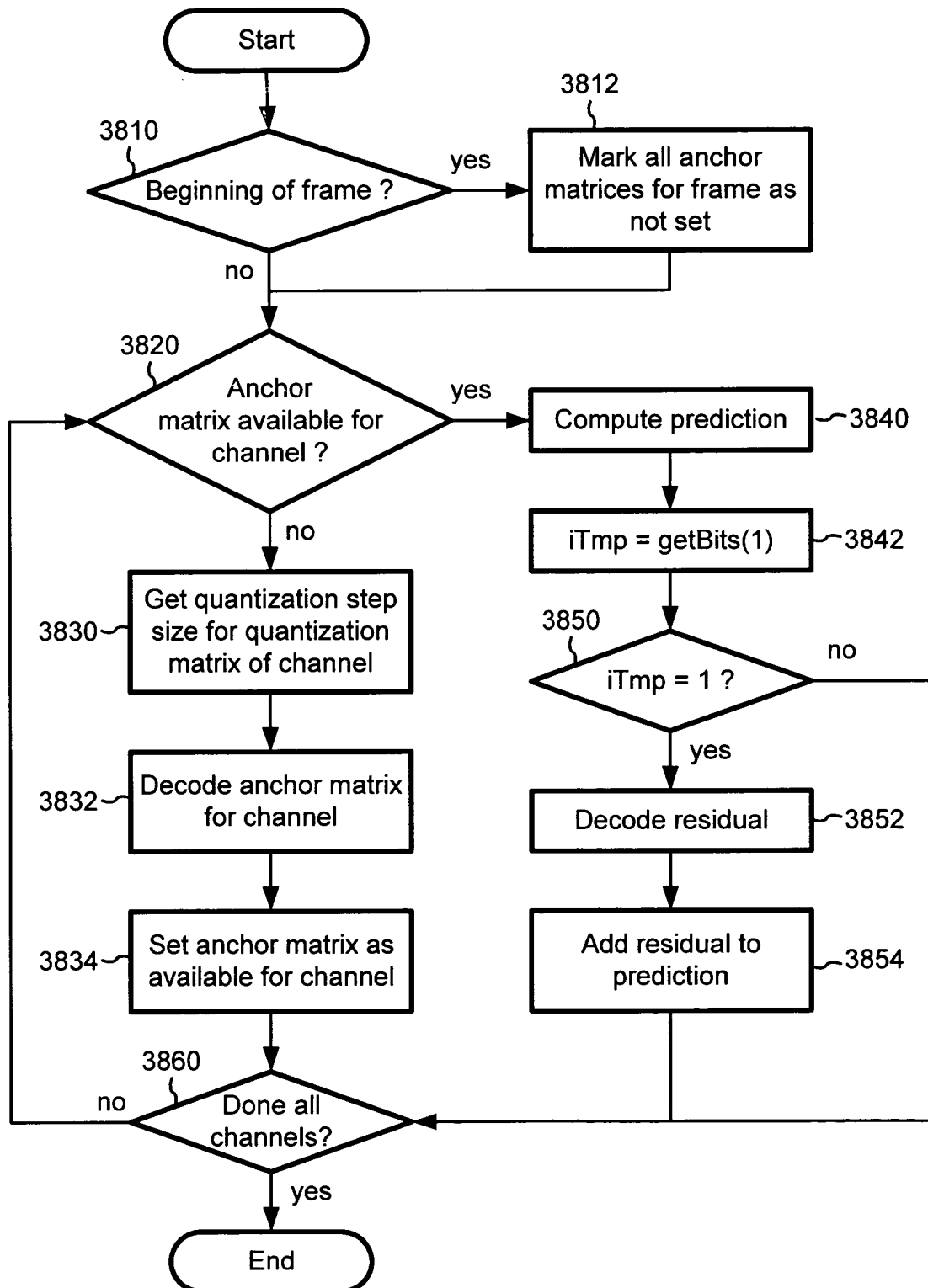


Figure 39

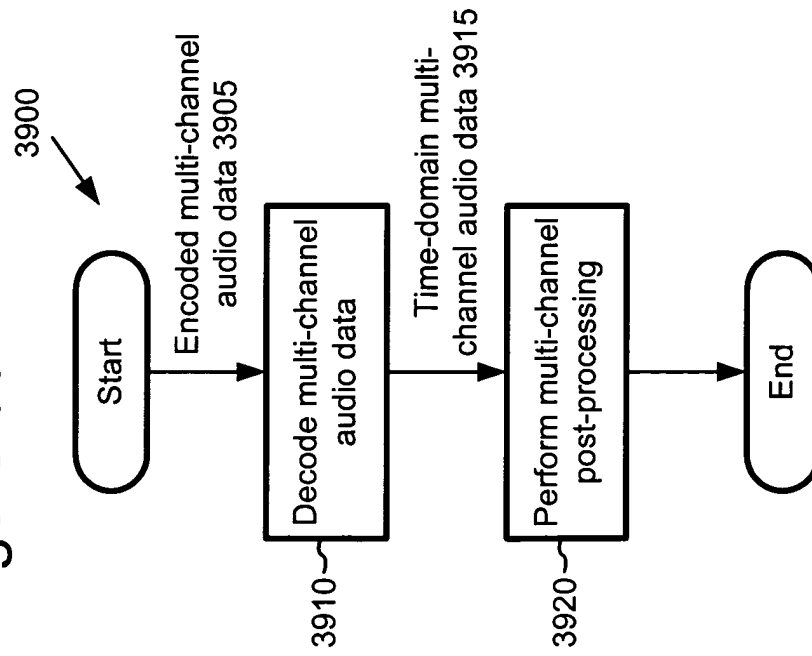


Figure 41

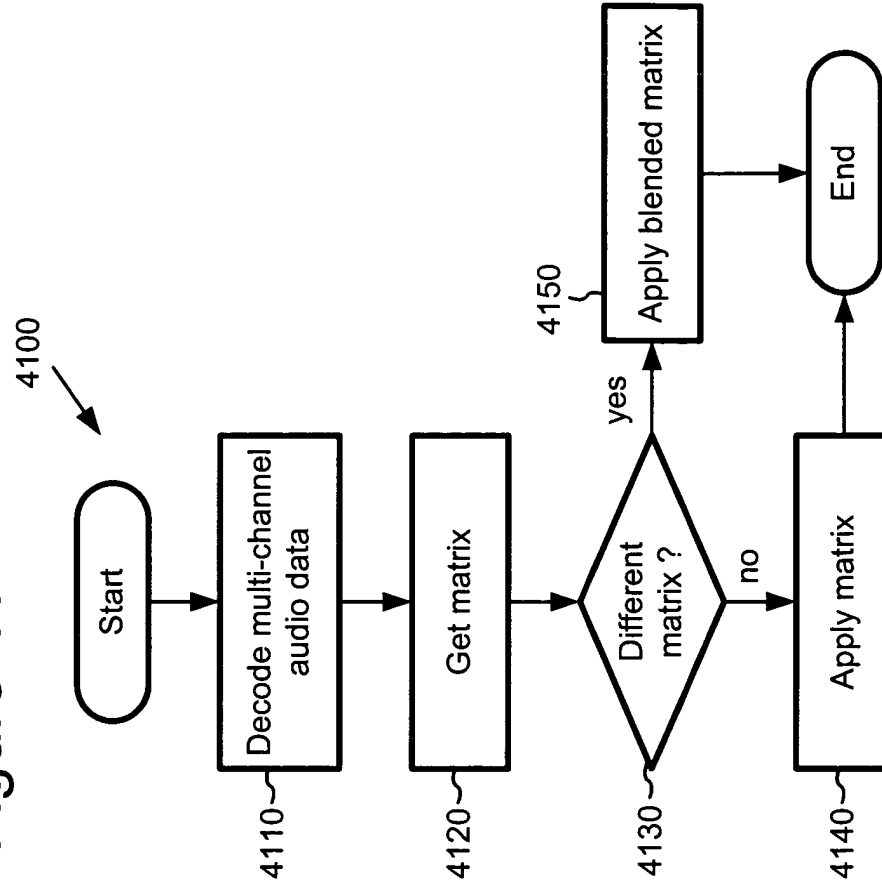


Figure 42

